

AMENDMENTS TO THE CLAIMS

A listing of the claims presented in this patent application appears below. This listing replaces all prior versions and listing of claims in this patent application.

Claim 1 (currently amended): An isolated nucleic acid sequence encoding a polypeptide of SEQ ID [[NO. 1]] NO: 1 or a polypeptide having at least [[about]] 90% sequence similarity to SEQ ID [[NO. 1]] NO: 1 and having hydroperoxide lyase (HL) activity.

Claim 2 (currently amended): The isolated nucleic acid sequence of claim 1 wherein the nucleic acid encodes a polypeptide of SEQ ID [[NO. 1]] NO: 1.

Claim 3 (currently amended): The isolated nucleic acid of claim 1 wherein the nucleic acid has the sequence of SEQ ID [[NO. 2]] NO: 2.

Claim 4 (withdrawn): An isolated polypeptide having the amino acid sequence of SEQ ID NO. 1 or a polypeptide having at least about 90% sequence similarity to SEQ ID NO. 1 and having HL activity.

Claim 5 (original): A vector comprising a nucleic acid sequence encoding a polypeptide of SEQ ID NO. 1 or a polypeptide having at least [[about]] 90% sequence similarity to SEQ ID [[NO. 1]] NO: 1 and having HL activity.

Claim 6 (currently amended): A host cell transformed with a vector comprising a nucleic acid sequence encoding a polypeptide of SEQ ID [[NO. 1]] NO: 1 or a polypeptide having at least [[about]] 90% sequence similarity to SEQ ID [[NO. 1]] NO: 1 and having HL activity.

Claim 7 (original): The host cell of claim 6 wherein the host cell is *E. coli*.

Claim 8 (withdrawn): A transgenic plant comprising a vector comprising a nucleic acid sequence encoding a polypeptide of SEQ ID NO. 1 or a polypeptide having at least about 90% sequence similarity to SEQ ID NO. 1 and having HL activity, wherein the nucleic acid is expressed in the plant.

Claim 9 (withdrawn): A method for the production of at least one green note compound comprising the steps of:

- a) reacting fatty acid hydroperoxide in the presence of a polypeptide having the amino acid sequence of SEQ ID NO. 1 or a polypeptide having at least about 90% sequence identity to SEQ ID NO. 1 and having HL activity to produce aliphatic aldehydes; and
- b) reacting the aliphatic aldehydes in the presence of isomerase and/or alcohol dehydrogenase.

Claim 10 (withdrawn): The method of claim 9 wherein in step (a) the fatty acid hydroperoxide is admixed with a tissue extract obtained from a plant transformed with a vector comprising a nucleic acid sequence encoding the polypeptide of SEQ ID NO. 1 or the polypeptide having at least about 90% sequence similarity to SEQ ID NO. 1 and having hydroperoxide lyase activity.

Claim 11 (withdrawn): The method of claim 9 wherein the at least one green note compound is (3-Z) hexenal.

Claim 12 (withdrawn): The method of claim 9 wherein the fatty acid hydroperoxide comprises 13-(S)-hydroperoxide linolenic acid, hydrolyzed linseed oil or a combination thereof.

Claim 13 (withdrawn): The method of claim 9 wherein the aliphatic aldehyde of step (b) is (2E)-hexenal and/or (3Z)-hexenol.